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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/582,632 | 06/12/2006 | Dominique Moreau | 4590-540 | 1977 |
| 33308 | 7590 | 10/06/2008 | EXAMINER | |
| LOWE HAUPTMAN & BERNER, LLP 1700 DIAGONAL ROAD, SUITE 300 ALEXANDRIA, VA 22314 | | | | OHARA, BRIAN M |
| ART UNIT | | PAPER NUMBER | | |
| 3644 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 10/06/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/582,632 | MOREAU, DOMINIQUE |
| | Examiner | Art Unit |
| | Brian M. O'Hara | 3644 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 June 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 19-36 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 19-36 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 12 June 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 03/19/2007.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____.

DETAILED ACTION

Drawings

1. Figure 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 19, 20, 24, 25, and 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syms et al (US Patent 4,746,082 A) in view of Woodland (US 5,927,648 A).** Syms et al. discloses an optronics system comprising: a stabilization mechanism (17), a mechanical structure (12) designed to interface with the carrier, a module (11) forming a section with three interfaces (See Fig. 2), a following cowl that is spherical (27), with a porthole (28), and mounted in a way as to be mobile relative-

bearing-wise (See Fig. 5), but does not disclose all of the specifics of the optics system or modular interchangeability. Woodland discloses a modular optronics system with at least two optronics elements (4), wherein an optronics element is a camera and another is a laser source (Column 7, Lines 1-8), which is accessible through a hatch and upgradeable ("rapid access sensor pod", Column 7, Lines 25-30). At the time of invention, it would have been obvious to one of ordinary skill in the art to provide the optronics system of Syms et al. with the modular, upgradeable, and interchangeable system of Woodland. The motivation for doing so would have been to make the optronics system of Syms et al. capable of performing many different mission scenarios.

3. In regard to claims 24, 29, and 30 Woodland discloses, spectral wavelength optimizing portholes ("thermal-infra red", Column 6, Line 67), along with an environmental control module (Column 15, Lines 5-6), and transmitting information to the ground (Column 7, Line 7).
4. In regard to claim 27, 28, 29, 30, 31, and 32 Syms et al. discloses lateral interfaces that can receive other modules one of the modules being a fairing to optimize the aerodynamic shape of the system (See Fig. 2) along with the ability to transmit information to the ground (Column 2, Lines 44-48). In view of the disclosure of Syms et al. and the modular interchangeability of Woodland it would be obvious to one of ordinary skill in the art to include modules for recording data, holding an optronics element, transmitting information to the ground, or holding environmental controls; the types of modules being necessitated by the mission at hand.

5. In regard to claims 33, 34, and 35, Syms et al. discloses a drone equipped with an optronics system, but does not disclose disposing the optronics system in a fuel tank or having landing gear modules. Because of the modular nature of the optics system it would be obvious to place the central module anywhere on an aircraft, including in the middle of a fuselage, or in a fuel tank. The motivation for doing so would be to balance the aircraft, this would be especially critical for a small drone where the weight of the optics system could be considerable.

6. **Claims 21-23, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syms et al. (US Patent 4,746,082 A) in view of Johnson et al. (US Patent 6,424,804 B1).** Syms et al. discloses the modular optronics system described above, but does not disclose the following cowl being retractable. Johnson et al. discloses a retractable cowl (See Fig. 6), with the orientations and stabilization mechanism fixed on a platform (14) suspended in the cowl. At the time of invention, it would have been obvious to one of ordinary skill in the art to provide the optronics system of Syms et al. with a retractable cowl and platform for optronics. The motivation for doing so would have been to make the aircraft more aerodynamic when the optronic system was not in use.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on compressed 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/
Supervisory Patent Examiner, Art Unit 3644

/B. M. O./
Examiner, Art Unit 3644